



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

JUN 12 2018

Mr. Paul M. Rady
Chief Executive Officer
Antero Resources Corporation
1615 Wynkoop Street
Denver, Colorado 80202

Dear Mr. Rady:

The U.S. Environmental Protection Agency (the EPA) is issuing the enclosed Notice of Violation (NOV) to Antero Resources Corporation (Antero).

The EPA is issuing this NOV under Section 113(a)(1) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a)(1). We find Antero in violation of Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), and requirements and prohibitions of the West Virginia State Implementation Plan (WV SIP), including West Virginia permitting requirements and control requirements for regulated pollutants at the company's natural gas production facilities located in Doddridge County, Tyler County, and Ritchie County, West Virginia.

Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), gives the EPA several enforcement options to resolve these violations, including issuing an administrative compliance order, issuing an administrative penalty order, bringing a judicial civil action, and bringing a judicial criminal action.

We are offering Antero the opportunity to request a conference with us to discuss the violations identified in this NOV. A conference should be requested within 10 days following receipt of this NOV. This conference will provide Antero with a chance to present information on the identified violations, any efforts the company has taken to comply, and the steps it will take to prevent future violations. Please plan for technical and management personnel that are familiar with the design and operation of Antero's natural gas production facilities to take part in these discussions. Antero may have legal counsel represent the company at this conference.

The EPA contacts in this matter are Jim Adamiec and Bruce Augustine, and they may be reached at (215) 814-2175 to request a conference. You may have your counsel call Robert Klepp at (202) 564-5805.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Cristina Fernandez', is positioned above the typed name.

Cristina Fernandez, Director
Air Protection Division
US the EPA, Region III

cc: Jesse Adkins, Assistant Director for Compliance and Enforcement, DAQ, WVDEP
Phillip A. Brooks, Director, Air Enforcement Division, Office of Civil Enforcement, US EPA HQ
John Jacus, Attorney, Davis Graham & Stubbs, Counsel for Antero
Enclosure: Notice of Violation

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:

Antero Resources Corporation
Denver, CO

Respondent

NOTICE OF VIOLATION

Proceedings Pursuant to
the Clean Air Act
42 U.S.C. § 7401 *et seq.*

NOTICE OF VIOLATION

The U.S. Environmental Protection Agency (the EPA) is providing this Notice of Violation (NOV or Notice) to inform Antero Resources Corporation (Antero or Respondent) of violations set forth in detail in the paragraphs that follow. We find that Antero violated the West Virginia State Implementation Plan (SIP), including permit requirements and requirements for the control of volatile organic compounds (VOCs).

The EPA is providing Antero with the opportunity to request a conference with us to discuss the violations alleged in the NOV. This conference will provide Antero a chance to present information on the identified violations, any efforts Antero has undertaken to comply, and the steps Antero will take to prevent future violations. Please plan for the Antero's technical and management personnel to take part in these discussions. Antero may have legal counsel represent the company at this conference.

I. Antero Resources Corporation

1. Respondent is an exploration and production company whose business includes the extraction and production of natural gas, and hydrocarbon liquids (e.g., oil and natural gas condensate) at facilities located in the Appalachia Basin, including the Marcellus and Utica Shale Formations that are in Doddridge County, Tyler County, and Ritchie County, West Virginia (WV).
2. Respondent headquarters are located at 1615 Wynkoop St., Denver, CO 80202.
3. Respondent maintains a West Virginia business mailing address at 535 White Oaks Blvd, Bridgeport, WV 26330.

4. Respondent is the owner and operator of natural gas production facilities (Facilities) relevant to this Notice identified below.

Facility Name	Facility ID# ¹	Physical Location or Address
Charlene Wellpad	085-00036	60 Gnats Run, Pennsboro, WV 26415
Diane Davis Pad	017-00103	2899 Sam Cavins Road, West Union, WV 26456
Eddy Wellpad	085-00030	Pennsboro, Ritchie County WV
Edwin Wellpad	085-00034	2720 White Oak Road, Pennsboro, WV 80202
Estlack Wellpad	095-00057	2288 Purgatory Road, Alma, WV 26320
Fritz Wellpad	017-000107	201 Elliot Road, West Union, WV 26456
Hamilton Wellpad	017-00078	Access road off of Camp Mistake Road (CR-24), Shirley, WV 26434
John Richards Wellpad	085-00037	5513 Lynn Camp Road, Pennsboro, WV 26415
Lockhart Heirs West Wellpad	085-00054	1132 Oxford Road, Pullman, WV 26421
Mackay Wellpad	085-00041	2177 Leeson Run, Pennsboro, WV 26415
Ness Wellpad	085-00032	3237 Oxford Road, Pullman, WV 26421
Primm Wellpad	017-00091	1313 Oxford Road, West Union, WV 26456
Robert Williams Wellpad	017-00099	20 Cabin Run Road, West Union, WV 26456
Rock Run Wellpad	017-00108	794 Tunnel Hill Road, West Union, WV 26456
Walnut West Wellpad	085-00038	Pennsboro, Ritchie County, WV
Weigle East Wellpad	095-00045	Middleburn, Tyler County, WV

5. On September 18, September 19, and September 20, 2017, the EPA conducted site inspections of the Facilities to verify compliance with permitting requirements and applicable State and Federal regulations implemented under the Clean Air Act. The EPA's findings are discussed in the factual background and violations sections below.

II. Clean Air Act

¹ Facility Identification Number (ID#) provided by the West Virginia Department of Environmental Protection Division of Air Quality (DAQ)

6. The Clean Air Act (the Act) is designed to protect and enhance the quality of the nation's air resources so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).
7. Section 108(a) of the Act, 42 U.S.C. § 7408(a), requires the Administrator of the EPA to identify and prepare air quality criteria for each air pollutant, emissions of which may endanger public health or welfare, and the presence of which results from numerous or diverse mobile or stationary sources. For each such “criteria” pollutant, Section 109 of the Act, 42 U.S.C. § 7409, requires the EPA to promulgate national ambient air quality standards (NAAQS) requisite to protect the public health and welfare.
8. Pursuant to Sections 108 and 109 of the Act, 42 U.S.C. §§ 7408 and 7409, the EPA has identified sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and ozone, among others, as criteria pollutants, and has promulgated NAAQS for these pollutants. Certain precursors to ozone formation, such as volatile organic compounds (VOC) and oxides of nitrogen (NO_x), are regulated as part of the air quality standards for ozone itself. 40 C.F.R. §§ 50.6 to 50.11.
9. Under Section 107(d) of the Act, 42 U.S.C. § 7407(d), each state is required to designate those areas within its boundaries where the air quality either meets or does not meet the NAAQS for each criteria pollutant, or where the air quality cannot be classified due to insufficient data. An area that meets the NAAQS for a particular criteria pollutant is termed an “attainment” area with respect to such pollutant. An area that does not meet the NAAQS for a particular criteria pollutant is termed a “nonattainment” area with respect to such pollutant.
10. At all times relevant to this Notice, Doddridge County, Tyler County, and Ritchie County, WV, where natural gas production facilities owned and operated by Antero are located, have been classified as attainment for all criteria pollutants.
11. Section 110(a) of the Act, 42 U.S.C. § 7410(a), requires each state to adopt and submit to the Administrator of the EPA, a plan which provides for implementation, maintenance, and enforcement, for each promulgated NAAQS, in each air quality control region (or portion thereof). Each such plan must include enforceable emission limitations and other control measures, and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that NAAQS are maintained.
12. Section 111(b) of the CAA, 42 U.S.C. § 7411(b) requires the EPA Administrator to list categories of stationary sources that, in his or her judgment, cause or contribute significantly to air pollution, which may reasonably be anticipated to endanger public health or welfare. The EPA must then issue “standards of performance” for new sources in such source categories. The EPA has the authority to define the source categories, determine the pollutants for which standards should be developed, and identify within each source category the facilities for which standards of performance would be established.
13. In 2012, pursuant to its authority under Section 111(b)(1)(B) of the Act to review and, if appropriate, revise NSPS, the EPA published the final rule, “Standards of Performance

for Crude Oil and Natural Gas Production, Transmission and Distribution” (40 CFR part 60, Subpart OOOO)(“2012 NSPS”). The 2012 NSPS established VOC standards for oil and natural gas- related operations, including gas well completions, centrifugal and reciprocating compressors, natural gas- operated pneumatic controllers and storage vessels. 40 C.F.R. §§ 60.5360-5499.

14. The EPA made amendments to the 2012 NSPS with respect to standards for storage vessels and other changes. 40 CFR Part 60, Subpart OOOOa.
15. Affected facilities that commence construction, modification or reconstruction after August 23, 2011, and on or before September 18, 2015 are subject to standards under 40 C.F.R. 60 Subpart OOOO. 40 C.F.R. § 60.5360. Affected facilities that commence construction, modification or reconstruction after September 18, 2015 are subject to standards under 40 C.F.R. 60 Subpart OOOOa. 40 C.F.R. § 60.5360a (hereinafter both of Subparts are collectively referred to as “NSPS Subpart OOOO/OOOOa”).
16. NSPS Subpart OOOO/OOOOa, at 40 C.F.R. § 60.5430 and § 60.5430a, define “storage vessel” as a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of non-earthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support.
17. NSPS Subpart OOOO/OOOOa, at 40 C.F.R. § 60.5365(e) and § 60.5365a(e), require owner or operator of an affected facility to perform an emissions determination that requires calculation of the potential for VOC emissions using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority.
18. NSPS Subpart OOOO/OOOOa, at 40 C.F.R. § 60.5365(e) and § 60.5365a(e), specify that a storage vessel affected facility is a single storage vessel with the potential for VOC emissions equal to or greater than 6 tpy.
19. NSPS Subpart OOOO/OOOOa, at 40 C.F.R. § 60.5410(h) and § 60.5410a(h), requires owners and operators of storage vessel affected facilities to demonstrate initial compliance with NSPS Subpart OOOO/OOOOa for each storage vessel. In order to demonstrate initial compliance with NSPS Subpart OOOO/OOOOa, owners and operators must have completed five compliance requirements found elsewhere in NSPS Subpart OOOO/OOOOa: determine the potential VOC emission rate (40 C.F.R. § 60.5365(e) and § 60.5365a(e)); reduce VOC emissions (40 C.F.R. § 60.5395(d) and § 60.5395a(a)); meet certain cover, closed vent and control device requirements, as applicable (40 C.F.R. §§ 60.5395(e), 5411(b) and (c); and 40 C.F.R. §§ 5411a(b), (c) and (d); meet reporting requirements, including an initial annual report due no later than 90 days after the initial compliance period (40 C.F.R. § 60.5420(b) and § 60.5420a(b)); and maintaining appropriate records (40 C.F.R. § 60.5420(c) and § 60.5420a(c)). Additional compliance requirements for control devices used to meet storage vessel standards must be met. 40 C.F.R. §§ 60.5412(d), and 40 C.F.R § 5412a.

III. West Virginia State Implementation Plan

20. Pursuant to Section 110 of the Clean Air Act (the Act or CAA), the EPA has approved, and amended from time to time, the State Implementation Plan for West Virginia (the WV SIP). Sec 40 C.F.R. § 52.2520(c).
21. The West Virginia SIP regulations governing the control of air pollution from construction and modification of stationary sources are codified at 45 WV C.S.R. § 13. The rule was originally part of the WV SIP approved by the EPA in 1972. The West Virginia legislature subsequently revised 45 WV C.S.R § 13 on several occasions. On September 10, 2003 the State submitted a formal revision to the WV SIP. The effective date for the EPA's approval of these revisions, incorporating them into the approved WV SIP, was April 9, 2007. 72 Fed. Reg. 5931 (February 8, 2007).
22. The West Virginia legislature subsequently revised 45 WV C.S.R. § 13 in 2008. The State proposed formal SIP revisions based on revisions to 45 WV C.S.R. § 13 to the EPA on July 20, 2009. The effective date for the revised regulations, incorporating them into the approved WV SIP, was August 20, 2014. EPA. 79 Fed. Reg. 42211-14 (July 21, 2014). The portions of 45 WV C.S.R § 13 described below with respect to this NOV are contained in the rule that the EPA approved effective on July 20, 2009 and the rule that the EPA approved effective on July 21, 2014.
23. Pursuant to 45 WV C.S.R. § 13-5.1, no person shall cause, suffer, allow or permit the construction, modification, relocation and operation of any stationary source to be commenced without notifying the Secretary of the West Virginia Department of Environmental Protection (WVDEP) of such intent and obtaining a permit to construct, modify, relocate and operate the stationary source as required in this rule or any other applicable rule promulgated by the Secretary.
24. 45 WV C.S.R § 13 sets forth the following definitions for purposes of requirements thereunder:
 - a. "Person" means any and all persons, natural or artificial, including any public or private corporation organized or existing under the laws of this or any other state or country, and any firm, partnership, association or business entity of whatever nature." 45 WV C.S.R. § 13-2.18.
 - b. "Stationary source" means "any building, structure, facility, installation, or emission unit or combination thereof," which exceeds specified emission thresholds, including a source which discharges, or has the potential to discharge, more than six (6) pounds per hour and ten (10) tons per year (tpy), or more than 144 pounds per calendar day, of any regulated air pollutant; or which discharges or has the potential to discharge more than two (2) pounds per hour or five (5) tons per year of hazardous air pollutants considered on an aggregated basis. 45 WV C.S.R. § 13-2.24.
 - c. "Regulated air pollutant" is defined to include nitrogen oxides (NO_x), volatile organic compounds (VOCs), particulate matter (PM); pollutants listed in Table 45-13A

(benzene, mercury, lead and lead compounds, etc.) and any air pollutant subject to new source performance standards (NSPS) promulgated under of the Act 111 of the Act. 45 WV C.S.R. § 13-2.20.

- d. "Hazardous air pollutant" (HAP) is defined as any substance listed pursuant to § 112(b) of the Act, 42 U.S.C. § 7412(b).
- e. "Construction" means any physical change or change in the method of operation (including onsite fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in an increase in the potential to emit or an increase in actual emissions of regulated air pollutants unless otherwise specifically provided within this rule. 45 WV C.S.R. § 13-2.5.
- f. "Modification" is defined to include "any physical change in or change in the method of operation of any existing stationary source, excluding any de minimis emissions units," which results in an emissions increase of any regulated air pollutant, or HAP, exceeding regulatory threshold quantities, and otherwise not excluded under the regulations. 45 WV C.S.R. § 13-2.17.

IV. SIP Permitting Process

- 25. Persons proposing to construct, modify, relocate, or operate a stationary source must file an application which contains sufficient information to enable the WV DEP Secretary to determine whether the source construction, modification, or relocation will be in conformance with the provisions of any applicable rules promulgated by the Secretary. Such information may include site information, plans, drawings, relating to the proposed construction, modification, or relocation of the source, the manner in which it will be operated, maximum emission rates and emissions control equipment data. 45 WV C.S.R. § 13-5.4.
- 26. A responsible official of the entity which will own or operate the stationary source must sign the permit application. The signature constitutes an agreement that the applicant will assume responsibility for the construction, modification, or relocation and operation of the stationary source in accordance with the permit application and permit conditions. 45 WV C.S.R. § 13-5.6.
- 27. WVDEP issued the Class II General Permit G70 to authorize the construction, modification, and operation of natural gas production facilities. 45 WV C.S.R. § 13-5.12 (authorizing general permits). The general permit was initially issued on October 18, 2013 as G70-A, and again on November 2, 2015 as G70-B. Subsequently, G70-C was issued on June 1, 2016; and most recently G70-D was issued on September 30, 2016 (hereinafter G70-A, G70-B, and G70-D will be collectively referred to as "the G70 General Permit").
- 28. General Permits G70-A, and G70-B continues to exist, however, there are no future registrations, modifications, or administrative updates issued thereunder following September 30, 2016, when General Permit G70-D was issued. If a registrant wishes to

modify an existing registration under General Permit G70-A, ~~one of these general permits~~, it must be done under the G70-D General Permit.

29. General Permit G70-C is superseded and replaced by G70-D. See G70-D, page 2 of 37.
30. The G70 General Permit applies to all natural gas production facilities designed and operated for the purpose of the production of oil and natural gas that is not specifically excluded. G70-D ¶2.3.1-3. See also G70-B ¶2.3.1-3 and G70-A ¶2.3.1-2. G70 applies to a facility whose owner or operator submits a general permit application registration (Permit Application) to WVDEP.
31. The G70 General Permit requires compliance by covered registrants as follows: “The registered facility shall be constructed and operated in accordance with the information filed in the Permit Application, alternative operating scenario notifications per section 1.1.3 of this General Permit, and amendments thereto or facility changes that do not meet the definition of modification as defined in 45CSR13. The Secretary may suspend or revoke a General Permit Registration if the plans and specifications upon which the approval was based are not adhered to.” G70-D ¶ 2.9.1. See also G70-B ¶ 2.9.1 and G70-A ¶ 2.9.1.
32. General Permits G70-D and G70-B require compliance with facility-wide emission limits for regulated pollutants as follows: 50 tons of NOx/year, 80 tons of CO/year, 80 tons of VOC/ year, 20 tons of SO2/year, and 20 tons of PM10 and 2.5/year. G70-D ¶ 1.1.1. See also G70-B ¶ 1.1.1. Facilities covered under the G70-A General Permit are subject to a facility-wide limit that prohibits emissions of, or potential to emit, any regulated pollutant equal to or greater than 100 tpy. G70-A ¶ 4.1.3.
33. General Permits G70-D and G70-B require compliance with facility-wide emission limits for HAPs that shall not exceed 8 tons/year of any individual HAP or 20 tons/year of aggregated HAPs. G70-D ¶ 1.1.2. See also G70-B ¶ 1.1.2. Facilities covered under G70-A are subject to a facility-wide emission limit that shall not exceed 10 tons/year of any individual HAP or 25 tons/year of aggregated HAPs G70-A ¶ 4.1.2.
34. For each storage vessel registered under the G70 General Permit, registrants shall conduct an emissions determination, which is used to determine storage vessel affected facility status. For storage vessels that commenced construction or modification after August 23, 2011, and on or before September 18, 2015, registrants shall perform an emissions determination in accordance with 40 C.F.R. § 60.5365 (Subpart OOOO). For storage vessels that commenced construction or modification after September 18, 2015, registrants shall perform an emissions determination in accordance with 40 CFR § 40 C.F.R. § 60.5365a (Subpart OOOOa). G70-D ¶ 6.1.1. See also G70-B ¶ 6.1.1 and G70-A ¶ 4.1.4.e.
35. Registrants pursuant to the G70 General Permit shall install operate and maintain all control devices listed in the G70 Permit Application for the purpose of controlling emissions from the storage vessels in accordance with what was registered with the registrant’s Permit Application. G70-D ¶ 6.1.2. See also G70-B ¶ 6.1.2 and G70-A ¶ 6.1.5.

36. For registrants pursuant to General Permits G70-D and G70-B, if the registrant, based on the emissions determination, has concluded that the storage vessel is subject to control requirements of 40 C.F.R. 60 Subparts OOOO and OOOOa, then the registrant shall comply with the control device and closed vent system requirements of Section 7.0 of the General Permit. G70-D ¶ 6.1.2.2.i.; See also G70-B ¶ 6.1.2.2.i. For registrants pursuant to G70-A, if the registrant, based on the emissions determination, has concluded that the storage vessel is subject to control requirements of 40 C.F.R. 60 Subparts OOOO and OOOOa, then the registrant shall comply with the control device and closed vent system requirements of Section 12.0 of the General Permit. G70-A ¶ 6.1.5.2.i.
37. For registrants pursuant to General Permits G70-D and G70-B, if the registrant, based on the emissions determination, has concluded that the storage vessel is not subject to control requirements of 40 C.F.R. 60 Subparts OOOO and OOOOa, then the registrant shall choose whether to comply with the control device and closed vent system requirements of either Section 7.0 or Section 8.0 of the General Permit. G70-D ¶ 6.1.2.1. See also G70-B ¶ 6.1.2.1. For registrants pursuant to the General Permit G70-A, if the registrant, based on the emissions determination, has concluded that the storage vessel is not subject to control requirements of 40 C.F.R. 60 Subparts OOOO, then the registrant shall choose whether to comply with the control device and closed vent system requirements of either Section 12.0 or Section 14.0 of the General Permit. G70-A ¶ 6.1.5.1. The registrant selects an option for the control device and closed vent system requirements when submitting the Permit Application.
38. Registrants pursuant to the G70 General Permit must maintain records of all information, including monitoring data, support information, reports and notifications, required by the permit for a five-year period. G70-D ¶ 3.5.1. See also G70-B ¶ 3.5.1. and G70-A ¶ 3.5.1.
39. Registrants pursuant to the G70 General Permit are required to maintain records of the determination of the VOC emission rate per storage vessel, including identification of the model or calculation methodology used to calculate the VOC emission rate in order to demonstrate compliance with the emission determination requirements. G70-D ¶ 6.3.2. See also G70-B ¶ 6.3.2 and G70-A ¶ 6.4.2.
40. Registrants pursuant to the G70 General Permit that chose to comply with Section 8.0 (or G70-A Section 14.0), who listed enclosed combustion devices in the Permit Application “shall operate and maintain the enclosed combustion device according to the manufacturer’s specifications for operating and maintenance requirements to maintain the guaranteed control efficiency listed in the General Permit Registration.” G70-D ¶ 8.1.2.3.vi. See also G70-B ¶ 8.1.2.3.vi. and G70-A ¶ 14.1.2.3.vi.
41. Registrants pursuant to General Permits G70-D and G70-B that chose to comply with Section 8.0, who listed enclosed combustion devices in the Permit Application “may claim a capture and control efficiency of 98% for those [enclosed combustion devices] meeting the requirements of [the design and operating requirements of the general permit, including manufacturer’s operating and maintenance requirements]”. G70-D ¶ 8.1.2.3. See also G70-B ¶ 8.1.2.3.
42. Registrants pursuant to the G70 General Permit must maintain records to demonstrate compliance with the design and operating requirements of the General Permit, including

the manufacturer's specifications for operating and maintenance requirements to maintain control efficiency. G70-D ¶ 8.4.4. See also G70-B ¶ 8.4.4. and G70-A ¶ 14.4.4.

43. Registrants pursuant to the G70 General Permit, “shall, to the extent practicable, install, maintain, and operate all air pollution control equipment and emission reduction devices listed in the General Permit Registration and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary”. G70-D ¶ 8.1.1. See also G70-B ¶ 8.1.1 and G70-A ¶ 4.1.1.
44. The registrant must comply with all applicable conditions of this Class II G70 General Permit. Any General Permit noncompliance constitutes a violation of the West Virginia Code, and/or the Clean Air Act, and is grounds for enforcement action by the Secretary or the EPA.” G70-D ¶ 2.9.2. See also G70-B ¶ 2.9.2 and G70-A ¶ 2.9.2.

V. Factual Background

45. For each Facility identified below, on or around the following dates, Respondent submitted a G70 Permit Application pursuant 45 WV C.S.R. § 13, requesting authorization from WVDEP for the construction, modification, and operation of the respective Facility.

Facility Name	Date of Permit Application
Charlene Wellpad	June 6, 2016
Eddy Wellpad	July 15, 2015
Edwin Wellpad	January 16, 2017
Estlack Wellpad	July 14, 2016
Fritz Wellpad	March 9, 2017
Hamilton Wellpad	May 2, 2016
John Richards Wellpad	October 23, 2015
Lockhart Heirs West Wellpad	December 9, 2016
Mackay Wellpad	June 7, 2016
Ness Wellpad	November 16, 2016
Primm Wellpad	February 23, 2017
Robert Williams Wellpad	July 29, 2015
Rock Run Wellpad	June 8, 2016
Walnut West Wellpad	July 8, 2015
Weigle East Wellpad	September 18, 2015

46. In each Permit Application, Respondent identified the use of one or more enclosed combustion devices manufactured by Cimarron, model 48" HV ECD, to control vapor emissions captured at the storage vessels, and chose to comply with closed vent system and control device requirement not subject to NSPS Subpart OOOO/OOOOa.

47. For each of the following Cimarron 48" HV enclosed combustion devices, Respondent represented an emissions stream temperature of 900 °F and a 98% destruction and removal efficiency (DRE) of total VOC (TVOC) in the Permit Application.

Facility Name	Enclosed Combustion Device ID#
Eddy Wellpad	EC001, EC002, EC003, EC004
John Richards Wellpad	EC001, EC002, EC003, EC004
Ness Wellpad	EC001, EC002, EC003, EC004
Robert Williams Wellpad	EC001, EC002, EC003, EC004
Walnut West Wellpad	EC001, EC002, EC003, EC004
Weigle East Wellpad	EC001, EC002

48. For each of the following Cimarron 48" HV enclosed combustion devices, Respondent represented a 98% DRE of TVOC in the Permit Application:

Facility Name	Enclosed Combustion Device ID#
Charlene Wellpad	EC001, EC002, EC003
Edwin Wellpad	EC001, EC002, EC003
Estlack Wellpad	EC001, EC002, EC003
Fritz Wellpad	EC001, EC002, EC003
Hamilton Wellpad	EC001, EC002, EC003
Lockhart Heirs West Wellpad	EC001, EC002, EC003
Mackay Wellpad	EC001, EC002, EC003
Primm Wellpad	EC001, EC002, EC003
Rock Run Wellpad	EC001, EC002, EC003

49. According to the Permit Applications for the Facilities, vapors from the Facility storage vessels that are captured and controlled are composed of VOC, HAP, and other constituents. The pre-control potential-to-emit (PTE) from the storage vessel units are in quantities that exceed facility-wide VOC emission limits as set forth in the General Permit. As claimed by the Respondent, controlling vessel emissions with the enclosed combustors reduce the VOC emitted from the storage vessel units by 98% to the following post control emissions:

Facility Name	Pre-control PTE Emissions from Storage Vessel Units	Post-control Emissions from Storage Tank Units (based on claimed 98% DRE)
Charlene Wellpad	1,518.57 tpy VOC	30.37 tpy VOC
Eddy Wellpad	2,215.50 tpy VOC	44.31 tpy VOC
Edwin Wellpad	1,828.60 tpy VOC	36.57 tpy VOC

Estlack Wellpad	841.56 tpy VOC	16.83 tpy VOC
Fritz Wellpad	106.65 tpy VOC	2.13 tpy VOC
Hamilton Wellpad	528.13 tpy VOC	10.56 tpy VOC
John Richards Wellpad	844.0 tpy VOC	16.88 tpy VOC
Lockhart Heirs West Wellpad	1,632.33 tpy VOC	32.64 tpy VOC
Mackay Wellpad	1,232.41 tpy VOC	24.64 tpy VOC
Ness Wellpad	701.50 tpy VOC	14.03 tpy VOC
Primm Wellpad	274.40 tpy VOC	5.49 tpy VOC
Robert Williams Wellpad	2,026.50 tpy VOC	40.53 tpy VOC
Rock Run Wellpad	798.66 tpy VOC	15.97 tpy VOC
Walnut West Wellpad	2,147.30 tpy VOC	42.94 tpy VOC
Weigle East Wellpad	1,810.80 tpy VOC	36.21 tpy VOC

50. In response to Antero's Permit Applications, on or around the following dates, WVDEP issued G70 General Permit registrations to Antero for the construction, modification, and operation of the Facilities in accordance with 45 WV C.S.R. § 13. Permit registration under the following permit number was in effect for each of the Facilities during the EPA's compliance inspections:

Facility Name	Date Permit Registration Issued	Permit Number
Charlene Wellpad	July 18, 2016	G70-C171A
Eddy Wellpad	September 15, 2015	G70-A061A
Edwin Wellpad	February 27, 2017	G70-D092B
Estlack Wellpad	September 30, 2016	G70-C143B
Fritz Wellpad	May 11, 2017	G70-D057B
Hamilton Wellpad	June 17, 2016	G70-B005B
John Richards Wellpad	January 19, 2016	G70-A071A
Lockhart Heirs West Wellpad	February 8, 2017	G70-D180C
Mackay Wellpad	August 8, 2016	G70-C115D
Ness Wellpad	January 20, 2016	G70-A097B
Primm Wellpad	April 13, 2017	G70-D028D
Robert Williams Wellpad	October 5, 2015	G70-A043A
Rock Run Wellpad	July 12, 2016	G70-C058B
Walnut West Wellpad	August 18, 2015	G70-A075A
Weigle East Wellpad	November 4, 2015	G70-A073B

51. Using optical gas imaging (OGI), the EPA inspectors observed significant VOC emissions emanating from the Cimarron enclosed combustion devices at the Facilities listed below. The EPA inspectors recorded operating temperatures from enclosed combustor monitoring devices at the time the emissions were observed. These observations are as follows:

Facility Name	Inspection Date	Temperature(s)	Quantity/Type of ECD exhibiting significant emissions
Charlene Wellpad	September 19, 2017	476-507 °F	2 Cimarron 48" HV ECD
Diane Davis Pad	September 19, 2017	204 °F	1 Cimarron 48" HV ECD
Eddy Wellpad	September 18, 2017	230 °F	1 Cimarron 48" HV ECD
Estlack Wellpad	September 18, 2017	approx. 250 °F	3 Cimarron 48" HV ECD
Fritz Wellpad	September 19, 2017	159-376 °F	4 Cimarron 48" HV ECD
Lockhart Heirs West Wellpad	September 19, 2017	344 °F	1 Cimarron 48" HV ECD
Ness Wellpad	September 20, 2017	278-323 °F	1 Cimarron 48" HV ECD
Primm Wellpad	September 19, 2017	195-373 °F	2 Cimarron 48" HV ECD
Robert Williams Wellpad	September 19, 2017	84 °F	1 Cimarron 48" HV ECD
Rock Run Wellpad	September 20, 2017	353 °F	1 Cimarron 48" HV ECD
Walnut West Wellpad	September 19, 2017	206 °F	1 Cimarron 48" HV ECD
Weigle East Wellpad	September 18, 2017	152-269 °F	4 Cimarron 48" HV ECD

52. Upon request, Antero provided the EPA on September 19, 2017 a copy of the Cimarron Installation, Operation and Maintenance Manual for Emission Control Device (Document Number 1200-101-02 Dated 2/3/2012) that applies to the permitted enclosed combustion devices. The Cimarron manual specifies an operational design range between a lower operating pressure of 1 ounce per square inch (oz/in²) and an upper operating pressure of 10 oz/in². The Cimarron manual also specifies an operating temperature range between 800 to 2,000 °F.
53. On February 20, 2018, the EPA staff and company representatives and counsel participated in a phone call as a follow-up to the EPA's compliance inspections. During the call, Antero represented that vapors from the Facility storage vessels freely flow to the Cimarron enclosed combustion devices and that there are no pressure controls in operation to regulate between lower operating pressure of 1 ounce per square inch (oz/in²) and an upper operating pressure of 10 oz/in² for the flow of gas from the storage tanks to the combustors at any of the Facilities.
54. Without pressure control regulators, Antero cannot maintain operation of the Cimarron enclosed combustion device within the pressure range specified in the manufacturer's specifications.

55. During the site inspections, the EPA inspectors observed that none of the Cimarron enclosed combustion devices that exhibited significant emissions were operating within the temperature range of 800 to 2,000 °F specified by the manufacturer.

VI. Violations

56. Respondent violated the condition set forth in the G70 General Permit (see G70-D ¶ 2.9.1., G70-B ¶ 2.9.1. and G70-A ¶ 2.9.1.) by failing to operate in accordance with the information filed in the Permit Application. For the Facilities below, Respondent submitted a Permit Application to WVDEP which identified the use of one or more enclosed combustion devices manufactured by Cimarron, model 48" HV ECD, to control vapors captured from the storage vessels, and represented that the device(s) had an emissions stream temperature of 900 °F and a DRE of 98% total VOC (TVOC).

Eddy Wellpad
Ness Wellpad
Robert Williams Wellpad
Walnut West Wellpad
Weigle East Wellpad

57. Respondent violated the condition set forth in the G70 General Permit (see G70-D ¶ 2.9.1., G70-B ¶ 2.9.1. and G70-A ¶ 2.9.1.) by failing to operate in accordance with the information filed in the Permit Application. For the Facilities below, Respondent submitted a Permit Application to WVDEP which identified the use of one or more enclosed combustion devices manufactured by Cimarron, model 48" HV ECD, to control vapors captured from the storage vessels, and represented that the device(s) had a DRE of 98% TVOC.

Charlene Wellpad
Estlack Wellpad
Fritz Wellpad
Lockhart Heirs West Wellpad
Primm Wellpad
Rock Run Wellpad

58. Respondent violated standards and emissions limitations for the enclosed combustion devices set forth in the G70 General Permit, (see G70-D ¶ 8.1.2.3.vi., G70-B ¶ 8.1.2.3. and G70-A ¶ 14.1.2.3.vi.) by failing to operate enclosed combustion devices in accordance with manufacturer's pressure and temperature specifications. For the Facilities below, Respondent installed and operated one or more enclosed combustion devices model 48" HV ECD manufactured by Cimarron. The Cimarron operation and maintenance manual for model 48" HV ECD, specifies an operating pressure range between 1 oz./in² and 10 oz./in², and an operating temperature ranging between 800 to 2000 °F to achieve the guaranteed control efficiency listed in the Permit Application of 98% DRE of TVOC.

Charlene Wellpad
Eddy Wellpad
Estlack Wellpad
Fritz Wellpad
Lockhart Heirs West Wellpad
Ness Wellpad
Primm Wellpad
Robert Williams Wellpad
Rock Run Wellpad
Walnut West Wellpad
Weigle East Wellpad

59. Respondent violated the general duty to control air emissions set forth in the G70 General Permit, (see G70-D ¶ 8.1.1., G70-B ¶ 8.1.2.3, and G70-A ¶ 4.1.1.) by failing to operate and maintain the enclosed combustion devices in a manner consistent with good air pollution control practices for minimizing emissions. The Facilities in violation of this permit condition are:

Charlene Wellpad
Eddy Wellpad
Estlack Wellpad
Fritz Wellpad
Lockhart Heirs West Wellpad
Ness Wellpad
Primm Wellpad
Robert Williams Wellpad
Rock Run Wellpad
Walnut West Wellpad
Weigle East Wellpad

VII. Enforcement Provisions

60. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides the Administrator with several enforcement options to resolve these violations, including issuing an administrative compliance order, issuing an administrative penalty order, bringing a judicial civil action, and bringing a judicial criminal action.
61. Sections 113(a)(1) and (3) of the Act, 42 U.S.C. § 7413(a)(1) and (3), provide that the Administrator may bring a judicial civil action in accordance with Section 113(b) of the Act, 42 U.S.C. § 7413(b), whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of the provisions of the West Virginia SIP.
62. Section 113(b) of the Act, 42 U.S.C. § 7413(b), as modified by the Federal Civil Penalties Inflation Adjustment Act of 1990, authorizes the Administrator to initiate a judicial enforcement action for a permanent or temporary injunction, and/or for a civil penalty of up to \$25,000 per day for each violation occurring on or before January 30,

1997; up to \$27,500 per day for each such violation occurring on or after January 31, 1997 and up to and including March 15, 2004; up to \$32,500 per day for each such violation occurring on or after March 16, 2004 through January 12, 2009; and up to \$37,500 per day for each such violation occurring on or after January 13, 2009 until November 2, 2015; statutory civil penalties for violations that occurred after November 2, 2015, where penalties are assessed on or after January 15, 2018, are \$97,229, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461, as amended by 31 U.S.C. § 3701, 40 C.F.R. § 19.4, and 74 Fed. Reg. 626 (Jan. 7, 2009) against any person whenever such person has violated, or is in violation of, inter alia, the requirements or prohibitions described in the preceding paragraph.

6/12/13

Date



Cristina Fernandez, Director
Air Protection Division
US the EPA, Region III